US011280101B2

(12) **United States Patent**
Checri

(10) **Patent No.: US 11,280,101 B2**
(45) **Date of Patent: Mar. 22, 2022**

(54) **ROTATING TAIL BRUSH FOR POOL CLEANER**

(71) Applicant: **Adel Edouard Checri**, Coppell, TX (US)

(72) Inventor: **Adel Edouard Checri**, Coppell, TX (US)

(73) Assignee: **Adel Edouard Checri**, Coppell, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 764 days.

(21) Appl. No.: **15/099,284**

(22) Filed: **Apr. 14, 2016**

(65) **Prior Publication Data**

US 2017/0298645 A1 Oct. 19, 2017

(51) **Int. Cl.**
E04H 4/16 (2006.01)
A46B 13/00 (2006.01)
A46B 13/02 (2006.01)

(52) **U.S. Cl.**
CPC ***E04H 4/1681*** (2013.01); ***A46B 13/001*** (2013.01); ***A46B 13/02*** (2013.01)

(58) **Field of Classification Search**
CPC A46B 13/001; A46B 13/02; E04H 4/1681
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,872,533	A *	3/1975	Proffit	B05B 3/0427 15/1.7
4,356,582	A *	11/1982	Stephenson	E04H 4/1681 134/167 R
4,651,377	A	3/1987	Staples	
6,119,707	A *	9/2000	Jordan	E04H 4/1681 134/167 R
9,119,463	B2	9/2015	Gopalan et al.	
2010/0011521	A1 *	1/2010	Collins	E04H 4/1654 15/1.7
2012/0255579	A1 *	10/2012	Bloink	E04H 4/1681 134/18
2014/0124423	A1	5/2014	Gopalan et al.	

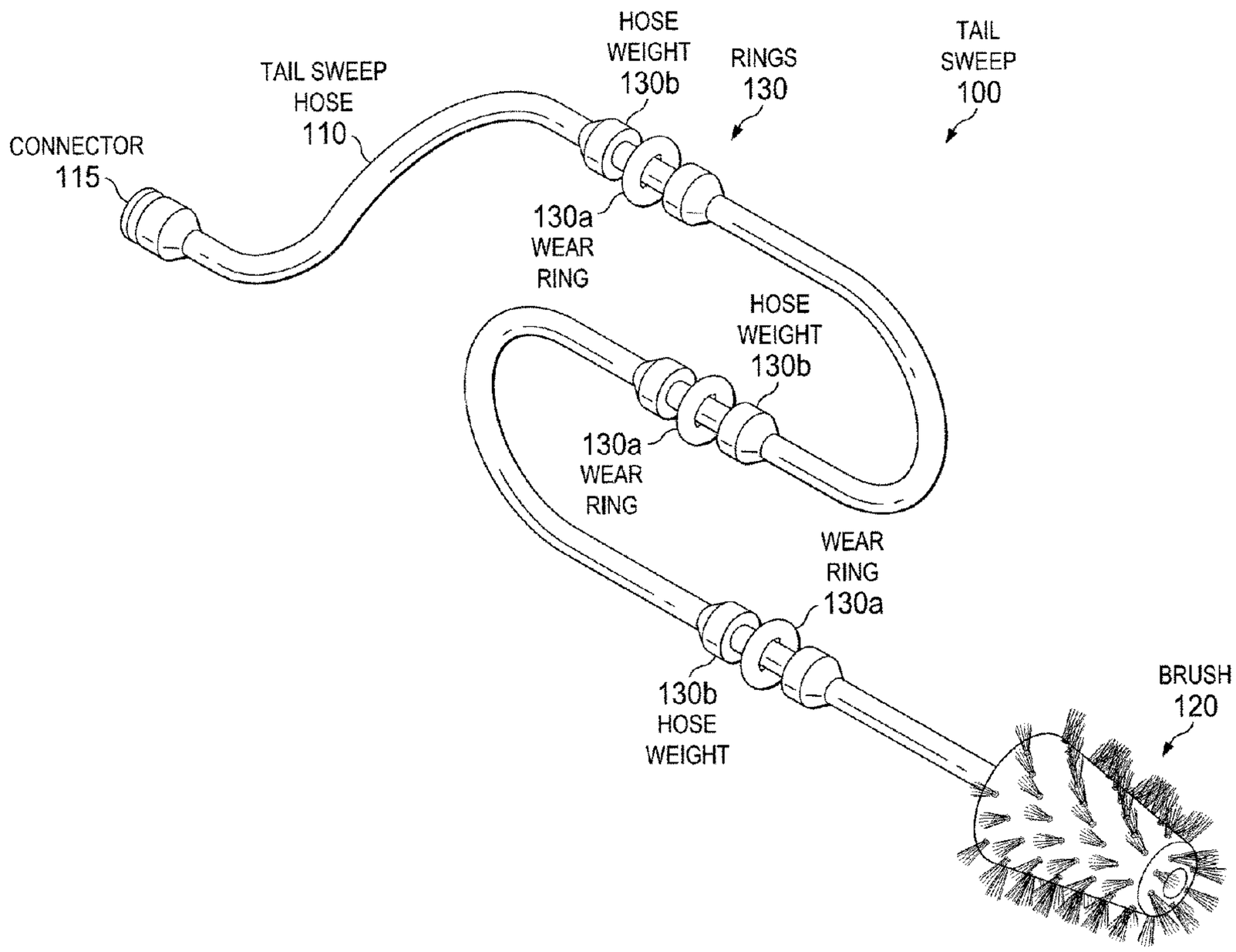
* cited by examiner

Primary Examiner — Douglas Lee
(74) *Attorney, Agent, or Firm* — Baker Botts, LLP

(57) **ABSTRACT**

A brush for cleaning a pool includes an at least partially hollow body for receiving a hose, wherein the hose includes a plurality of rings being rotatably disposed around the hose. The brush also includes a plurality of bristles that project from the at least partially hollow body and a means for coupling the brush to at least one of the plurality of rings which facilitates rotation around the hose along with the at least one of the plurality of rings to which it is coupled.

16 Claims, 9 Drawing Sheets



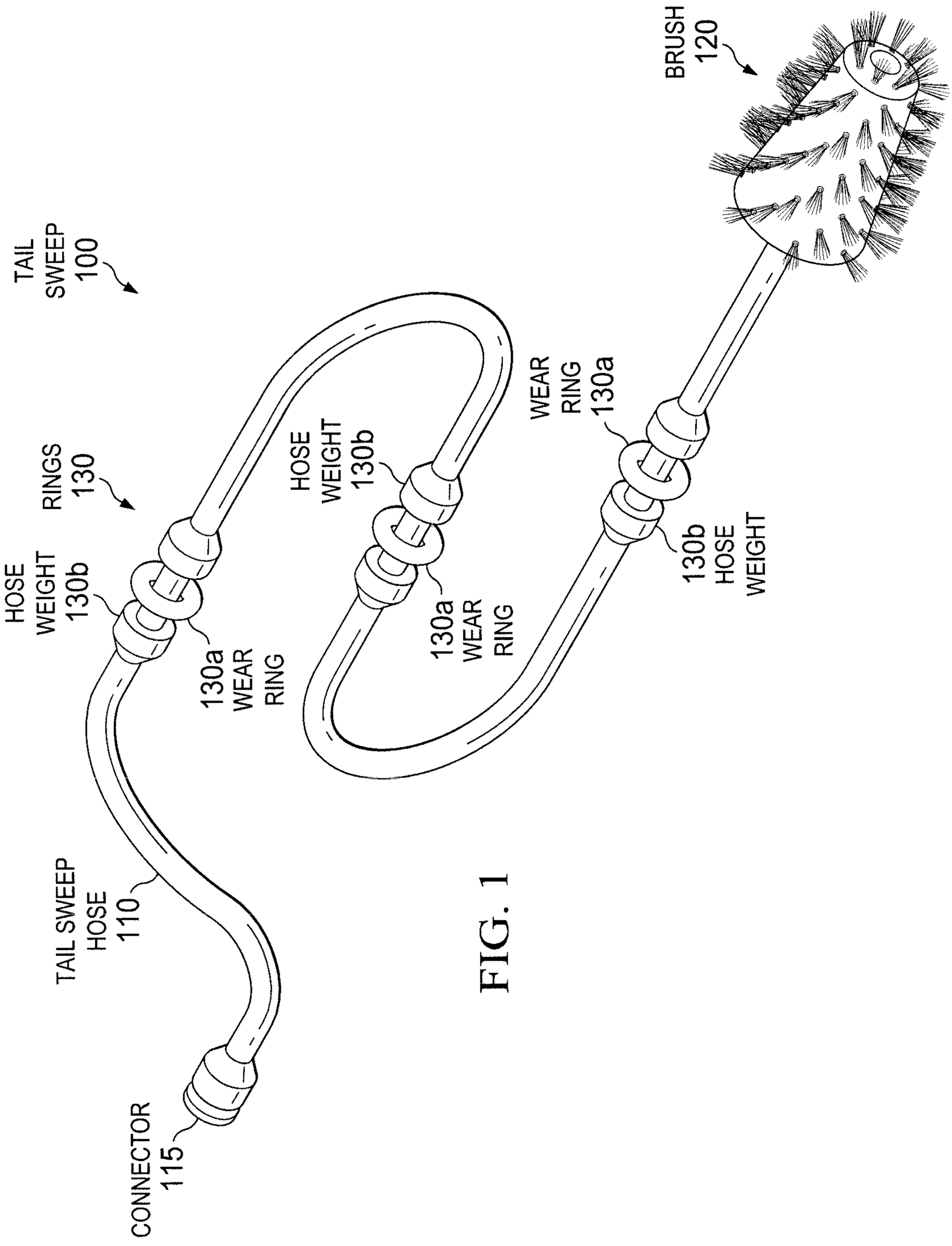

TAIL SWEEP 100
RINGS 130
HOSE WEIGHT 130b
130a WEAR RING
HOSE WEIGHT 130b
130a WEAR RING
WEAR RING 130a
130b HOSE WEIGHT
BRUSH 120
TAIL SWEEP HOSE 110
CONNECTOR 115

FIG. 1

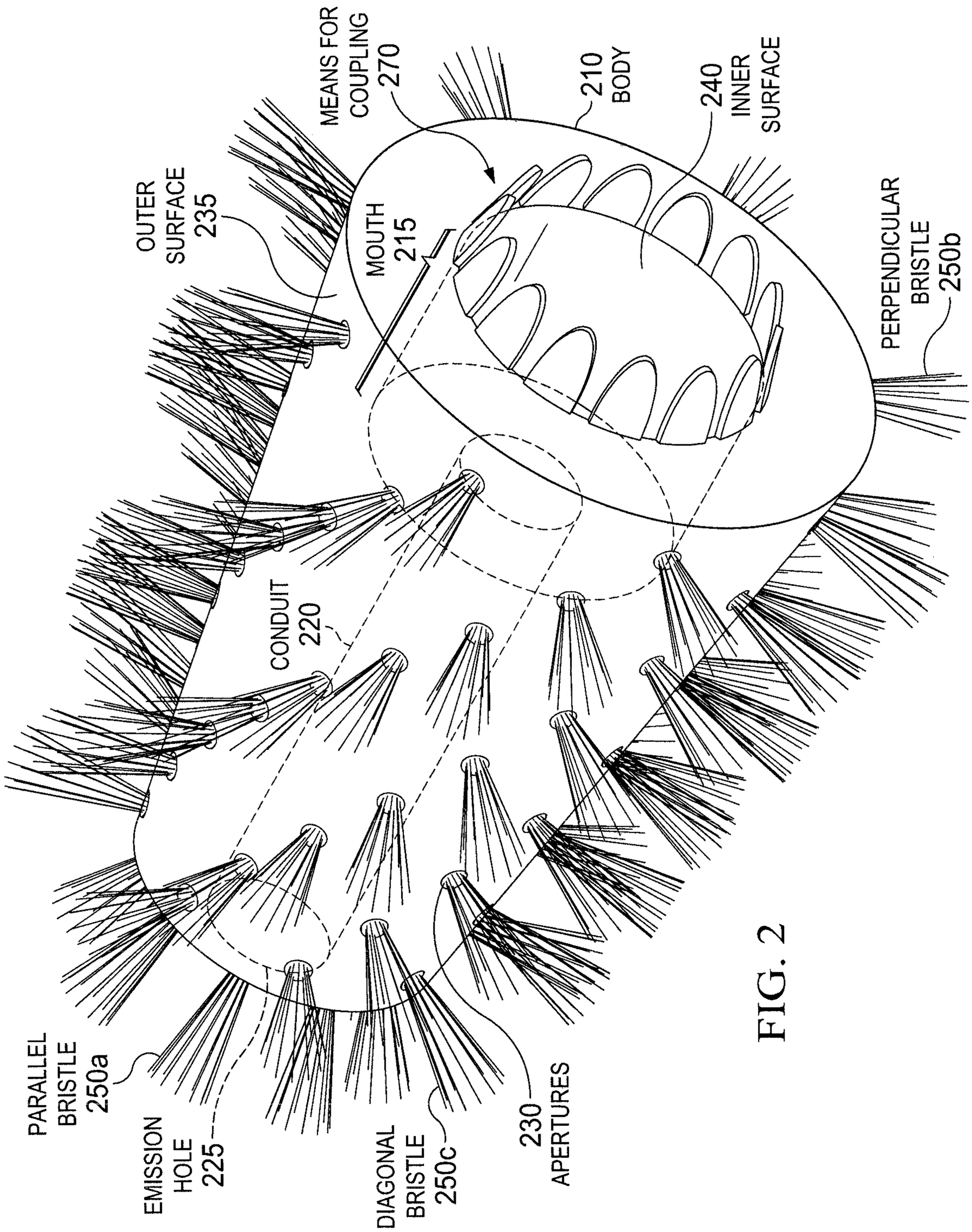

MEANS FOR COUPLING 270
210 BODY
240 INNER SURFACE
OUTER SURFACE 235
MOUTH 215
PERPENDICULAR BRISTLE 250b
CONDUIT 220
PARALLEL BRISTLE 250a
EMISSION HOLE 225
DIAGONAL BRISTLE 250c
230 APERTURES

FIG. 2

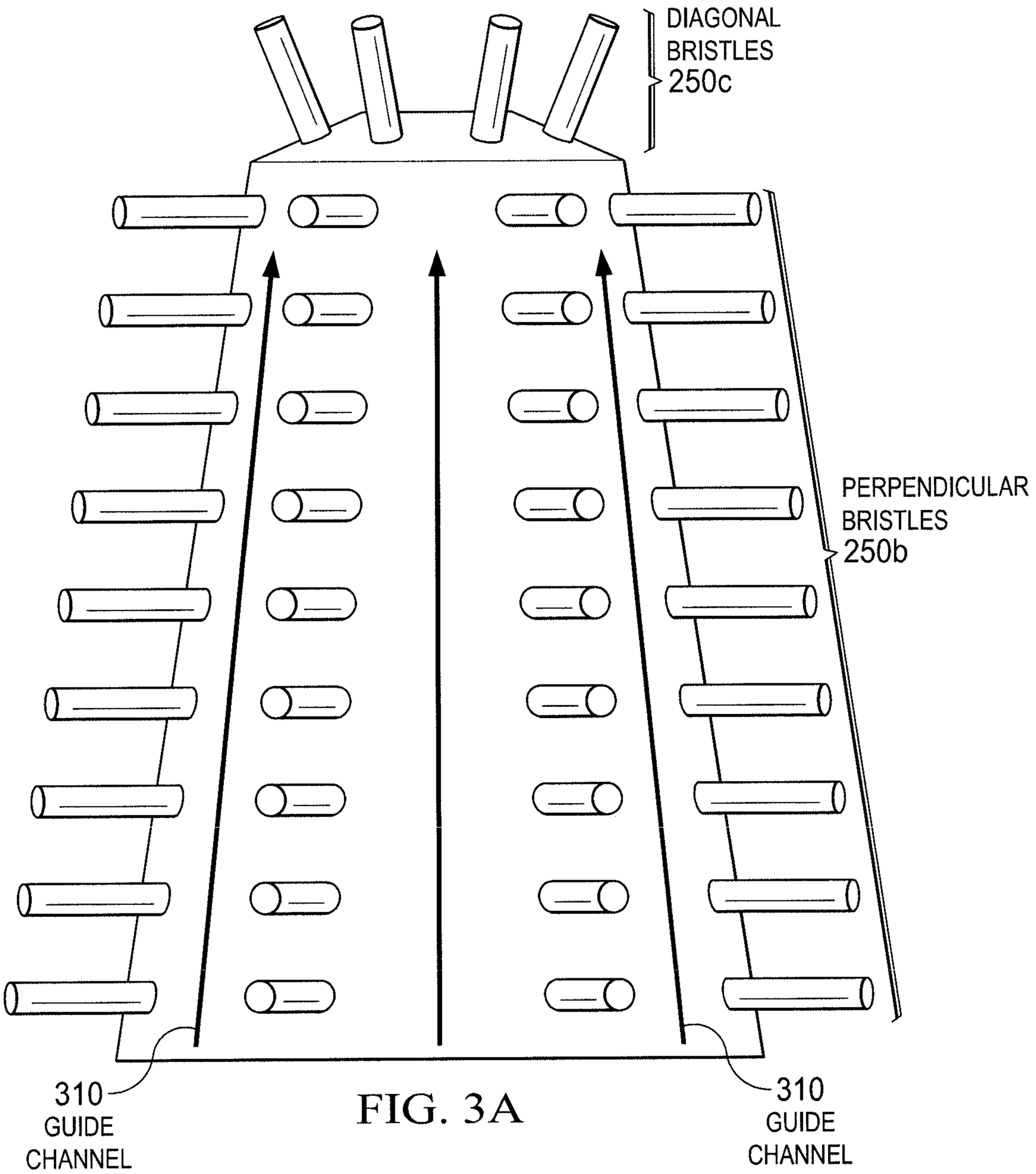

DIAGONAL
BRISTLES
250c
PERPENDICULAR
BRISTLES
250b
310
GUIDE
CHANNEL
310
GUIDE
CHANNEL

FIG. 3A

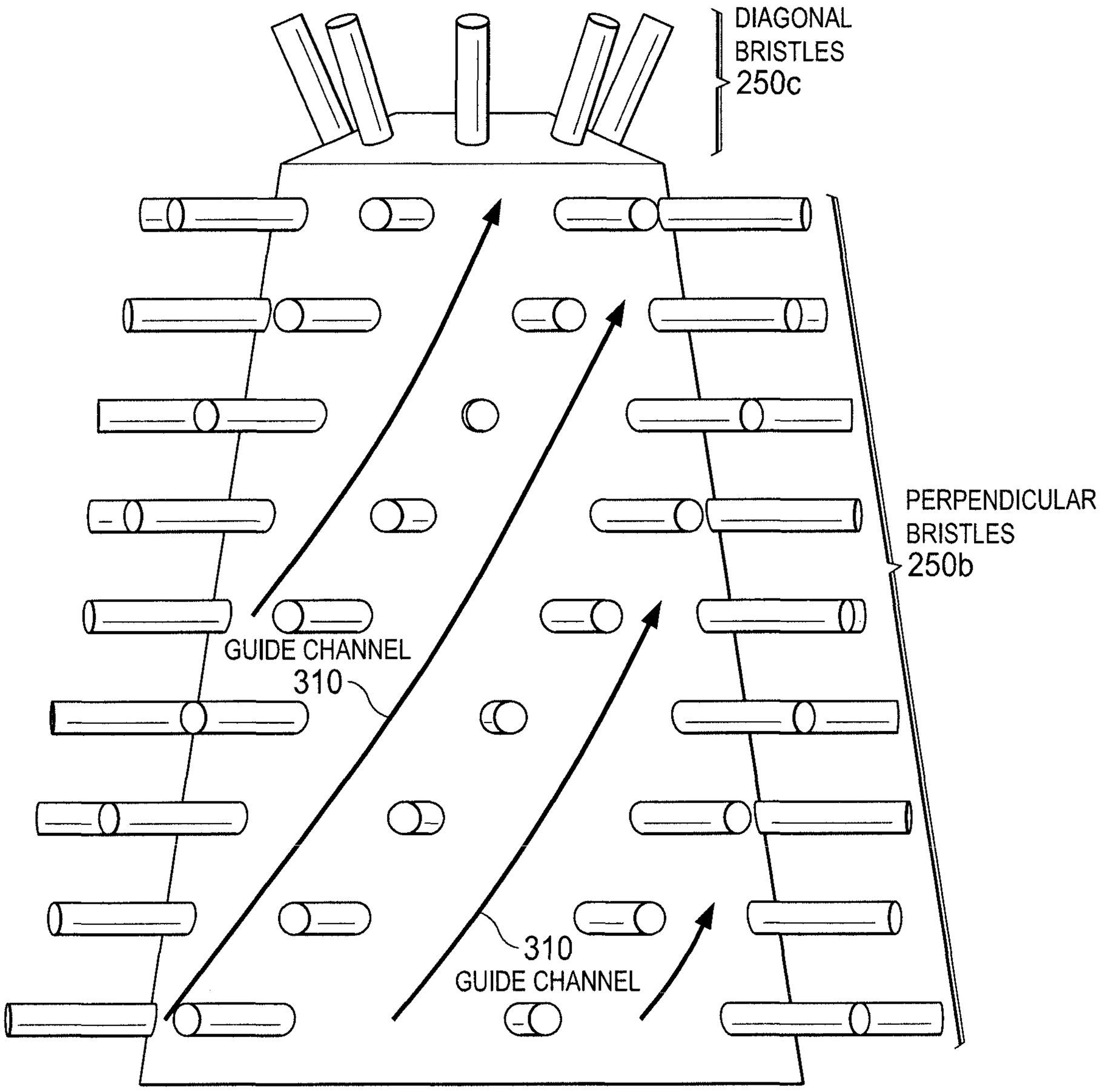

DIAGONAL
BRISTLES
250c
PERPENDICULAR
BRISTLES
250b
GUIDE CHANNEL
310
310
GUIDE CHANNEL

FIG. 3B

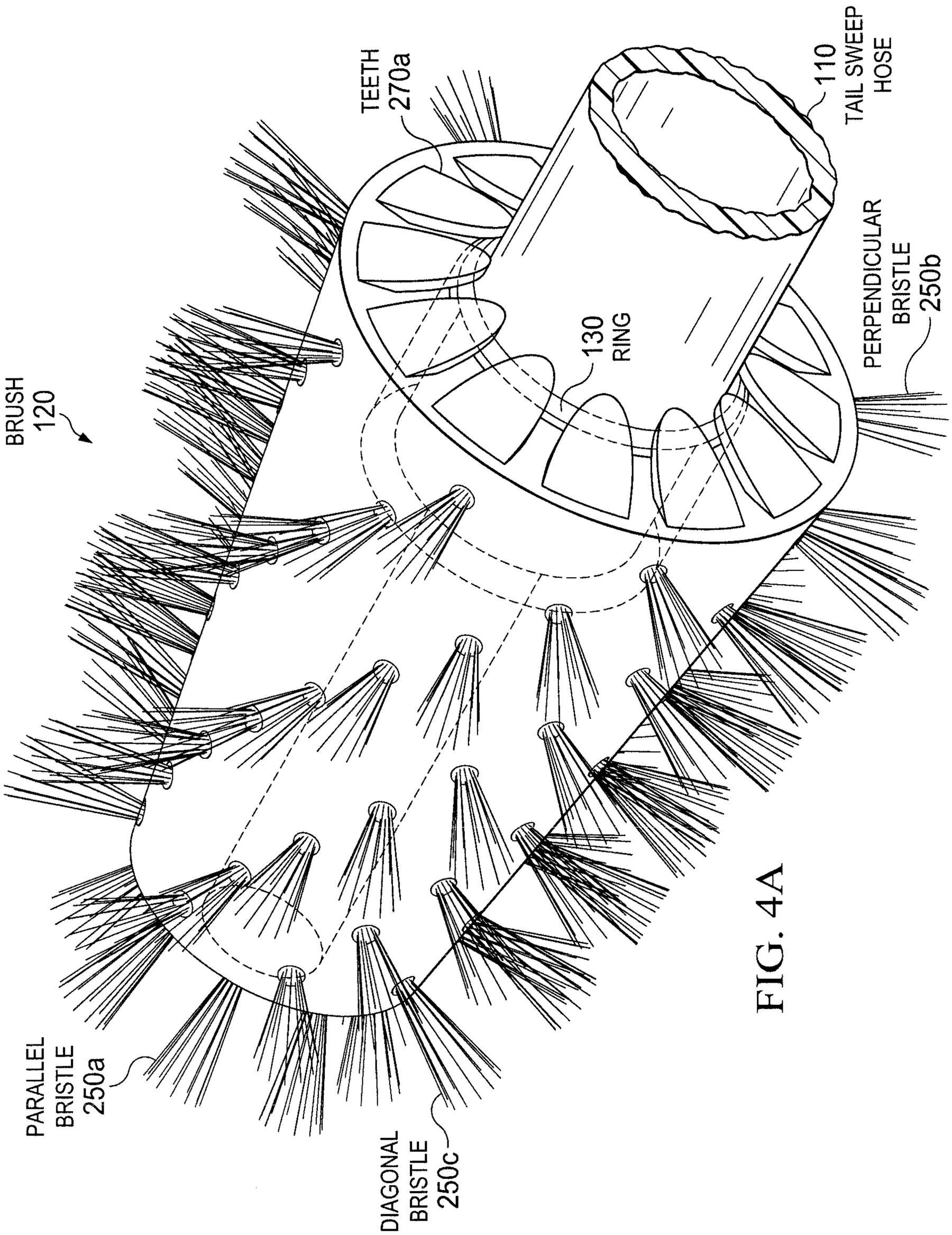

TEETH
270a
110
TAIL SWEEP
HOSE
PERPENDICULAR
BRISTLE
250b
130
RING
BRUSH
120
PARALLEL
BRISTLE
250a
DIAGONAL
BRISTLE
250c

FIG. 4A

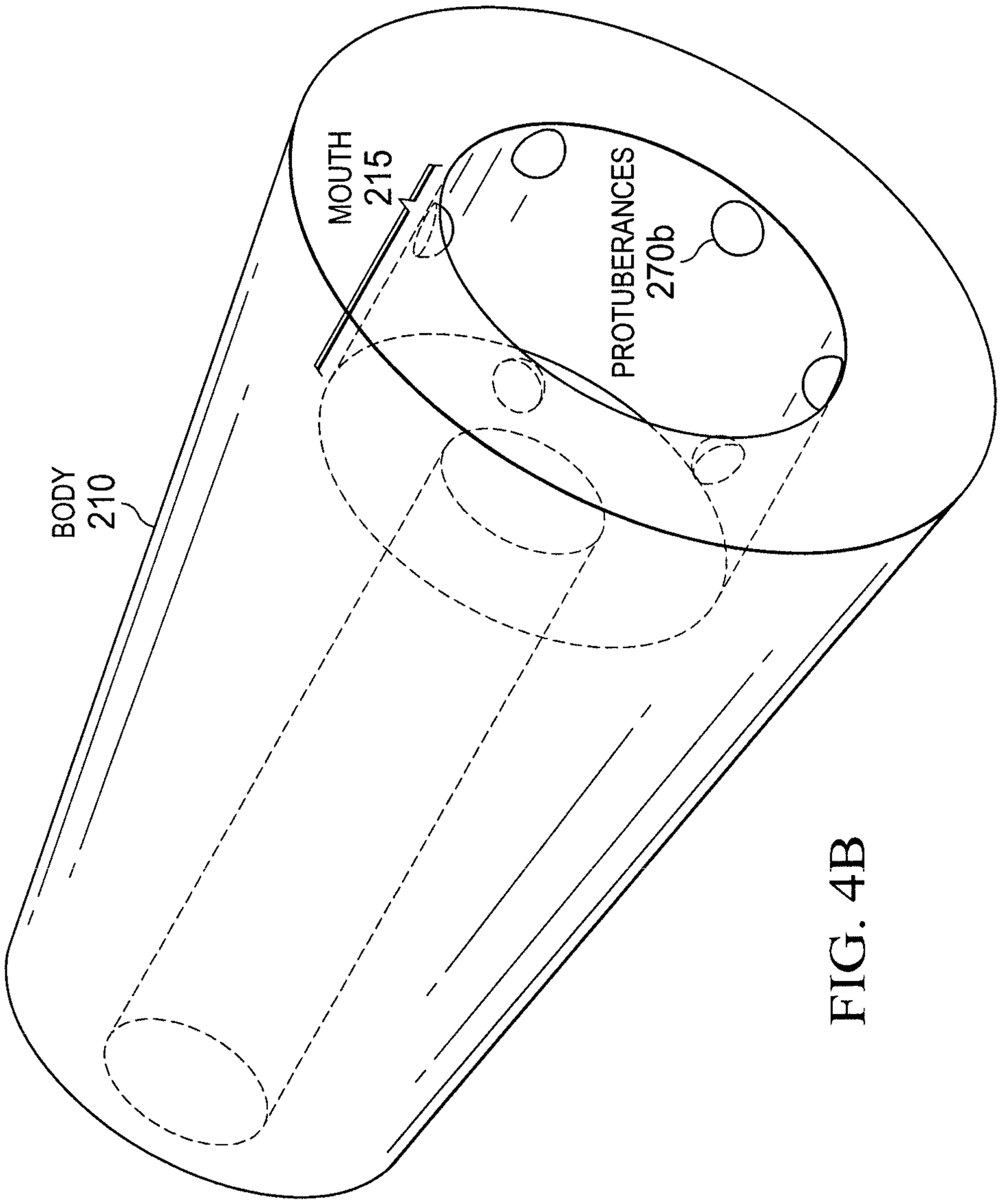


FIG. 4B

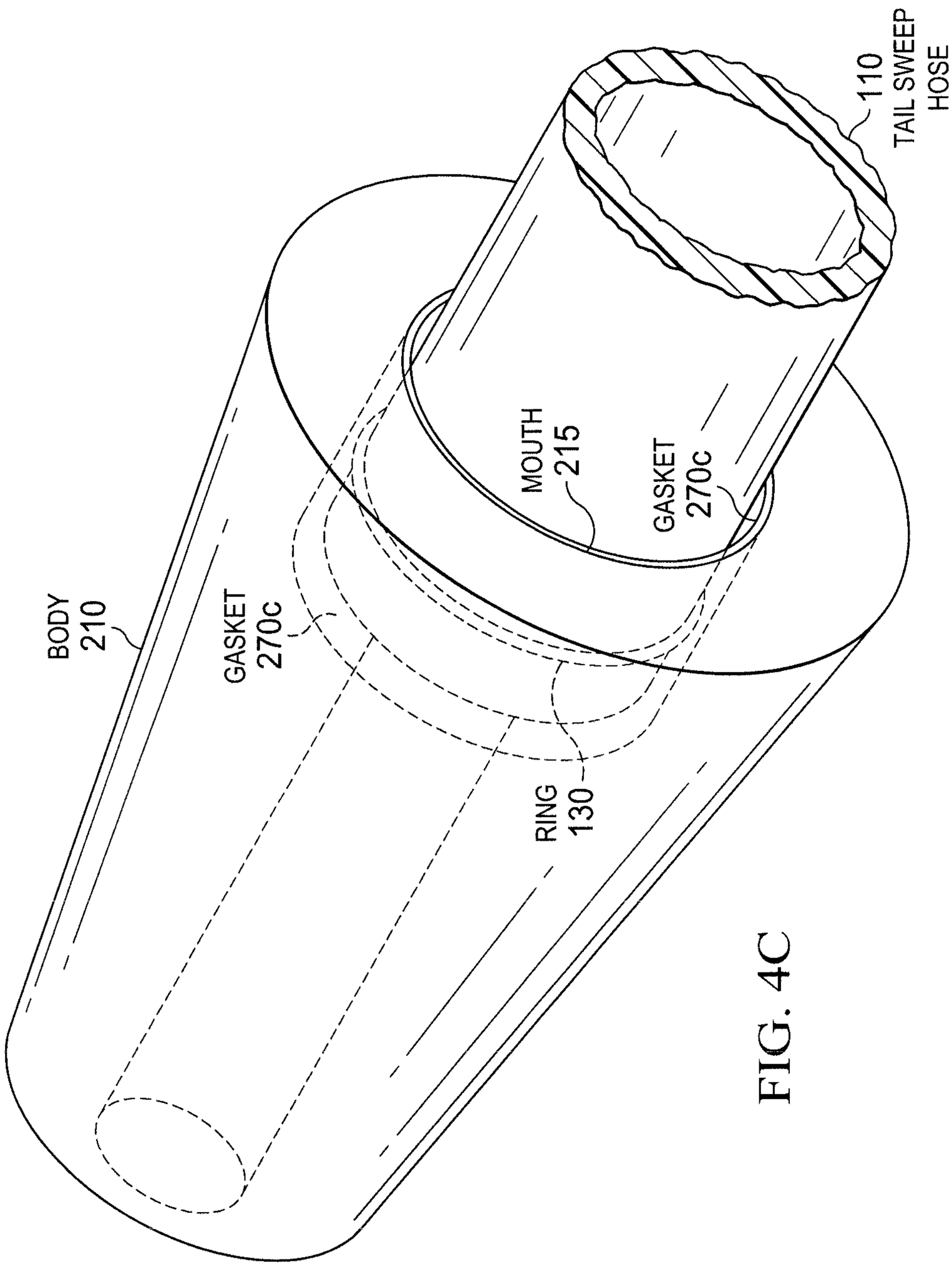

110
TAIL SWEEP
HOSE
MOUTH
215
GASKET
270c
BODY
210
GASKET
270c
RING
130

FIG. 4C

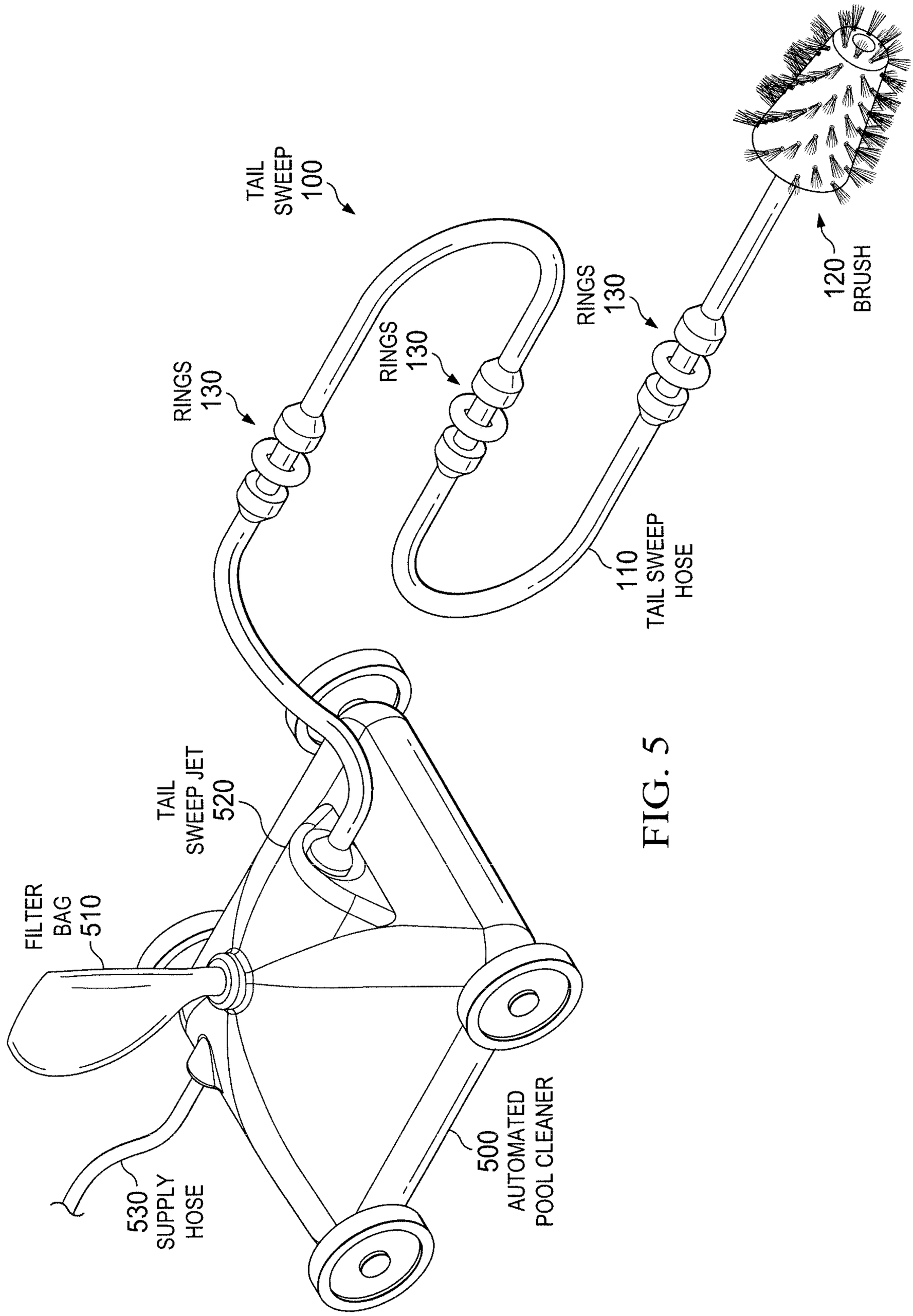

TAIL SWEEP 100
RINGS 130
RINGS 130
RINGS 130
120 BRUSH
110 TAIL SWEEP HOSE
TAIL SWEEP JET 520
FILTER BAG 510
530 SUPPLY HOSE
500 AUTOMATED POOL CLEANER

FIG. 5

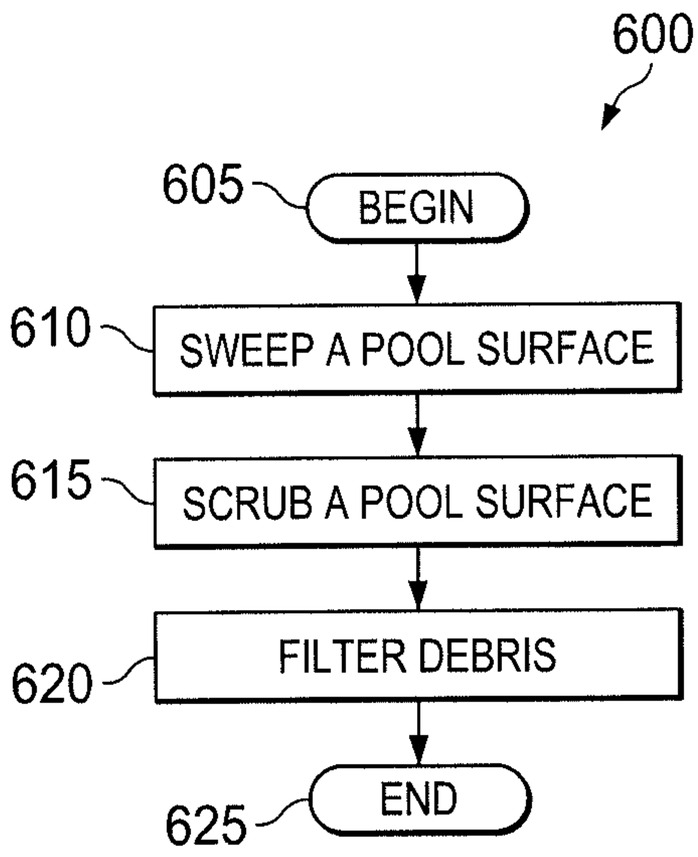

600
605
BEGIN
610
SWEEP A POOL SURFACE
615
SCRUB A POOL SURFACE
620
FILTER DEBRIS
625
END

FIG. 6

ROTATING TAIL BRUSH FOR POOL CLEANER

TECHNICAL FIELD

This disclosure relates in general to cleaning a swimming pool and more particularly to a rotating tail brush for a pool cleaner.

BACKGROUND

Swimming pools are associated with a host of issues that may arise if and when a pool is not properly maintained. For example, a pool that is not routinely cleaned can endanger the health of persons who swim in the pool and can drastically reduce the lifetime of various pool equipment. Proper maintenance of a swimming pool includes cleaning the pool to ensure the pool is free from algae, bacteria and contaminants such as dirt, debris, animals, and swimmers.

SUMMARY OF THE DISCLOSURE

According to one embodiment, a brush for use in cleaning a pool includes an at least partially hollow body for receiving a hose, wherein the hose includes a plurality of rings being rotatably disposed around the hose. The brush also includes a plurality of bristles that project from the at least partially hollow body and a means for coupling the brush to at least one of the plurality of rings which facilitates rotation around the hose along with the at least one of the plurality of rings to which it is coupled.

Technical advantages of certain embodiments may include better surface scrubbing and increased lifetime due to the rotation of the brush. Additionally, certain embodiments may provide advantages such as increased reliability and reduced cost due to relatively few moving parts. Other technical advantages will be readily apparent to one skilled in the art from the following figures, descriptions, and claims. Moreover, while specific advantages have been enumerated above, various embodiments may include all, some, or none of the enumerated advantages.

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present disclosure and its advantages, reference is now made to the following description, taken in conjunction with the accompanying drawings, in which:

FIG. **1** illustrates an example tail sweep, according to embodiments of the present disclosure.

FIG. **2** illustrates a brush of the tail sweep of FIG. **1**, according to embodiments of the present disclosure.

FIGS. **3**A-**3**B illustrate example bristle configurations of the brush of FIG. **2**, according to embodiments of the present disclosure.

FIGS. **4**A-**4**C illustrate example means for coupling of the brush of FIG. **2**, according to embodiments of the present disclosure.

FIG. **5** illustrates an example automated pool cleaner to which the tail sweep of FIG. **1** is coupled, according to embodiments of the present disclosure.

FIG. **6** illustrates an example method of cleaning a pool with the tail sweep of FIG. **1**, according to embodiments of the present disclosure.

DETAILED DESCRIPTION OF THE DISCLOSURE

Generally, cleaning a pool includes pool sweeping, surface scrubbing, and debris removal. Although these tasks are regularly performed by persons such as pool owners and/or pool cleaning service employees, manual pool cleaning is a time intensive and burdensome chore that requires a great deal of effort. As a result, many automated pool cleaners have been developed over the years such as those manufactured by Polaris, Hayward, Zodiac, and Pentair. Such automated pool cleaners usually include components to perform the various cleaning tasks. For example, an automated pool cleaner may include a tail sweep for pool sweeping, a filter bag for debris removal, and a scrubber for surface scrubbing.

Generally, a tail sweep includes a hose that is coupled to an automated pool cleaner and trails behind the pool cleaner as it drives along the surfaces of the pool. Water may be pumped through, and discharged from, the tail sweep with sufficient pressure permitting it to sweep the surfaces of the pool. Sweeping includes agitating the debris that has settled on the pool surfaces to facilitate debris removal by a filter bag of the automated pool cleaner.

Although sweeping and filtering the pool may rid a pool of some debris, it may not remove all of the debris. For example, sweeping may not remove staining resulting from chemical deposits forming over algae, dust, or dirt. Thus, it may be necessary to scrub the pool surface to remove the stain. To this end, tail sweeps typically include scrubbers.

A scrubber is typically made from a sponge-like material that rubs pool surfaces as the cleaner moves about the pool. Commonly, scrubbers are installed on the tail sweep by sliding the scrubber over the hose and into a position near the uncoupled end of the hose. To ensure the scrubber stays in position, scrubbers are configured to fit snugly around the tail sweep hose. Thus, scrubbers are substantially stationary and do not rotate around the hose. As a result, scrubbers wear unevenly without manual readjustment of the scrubber. Because of this, scrubbers are frequently replaced even though only a portion of the scrubber exhibits use or wear. Accordingly, there is a need for a rotatable scrubber that wears evenly (thereby extending the lifetime of the scrubber) and is both inexpensive to manufacture and easy to install.

These and other problems of typical scrubbers may be reduced or eliminated by using a rotating tail brush on a tail sweep. The following describes embodiments of rotating tail brushes that provide these and other desired features.

FIG. **1** illustrates a tail sweep **100**, according to certain embodiments. Tail sweep **100** includes a tail sweep hose **110**, a brush **120**, and rings **130**. In general, brush **120** rotates about a tail sweep hose **110** of an automated pool cleaner **500** during the cleaning of a swimming pool.

Tail sweep **100** includes multiple components with a single one of some of components being represented in FIGS. **1**-**5**. One skilled in the art will understand that more or less than the depicted number of components can be included as performance demands dictate. One skilled in the art will also understand that tail sweep **100** can include other components that are not illustrated but are typically included with tail sweeps.

Tail sweep hose **110** may be an elongated tube permitting the pass-through of water. In some embodiments, tail sweep hose **110** is constructed from a flexible material (e.g., plastic, elastomers, etc.) to permit tail sweep hose **110** to move through the water when water is forced through tail sweep hose **110**.

In some embodiments, tail sweep hose **110** is configured to couple to automated pool cleaner **500** (see e.g., FIG. **5**). Tail sweep hose **110** may terminate on one end with a connector **115**. In some embodiments, connector **115** is used to couple tail sweep **100** to automated pool cleaner **500**. As

depicted, tail sweep hose **110** terminates on the end opposite connector **115** with brush **120**. Brush **120** is described in more detail below in reference to FIG. **2**.

In some embodiments, rings **130** are disposed around tail sweep hose **110**. In some embodiments, rings **130** may be positioned along tail sweep hose **110** between connector **115** and brush **120**. In some embodiments, rings **130** are freely rotatable around tail sweep hose **110**. Rings **130** may be of any suitable size and any suitable shape. Any suitable number of rings **130** may be disposed around tail sweep hose **110**.

In some embodiments, rings **130** are wear rings **130***a*. Generally, wear rings **130***a* protect tail sweep hose **110** from damage resulting from its movement around in the water and/or collision with pool surfaces. In some embodiments, rings **130** are hose weights **130***b*. Generally, hose weights **130***b* weigh down tail sweep **100** which encourages brush **120** to contact pool surfaces. Hose weights **130***b* may also be used to deter tail sweep **100** from whipping out of the water. Although this disclosure depicts and describes particular types of rings **130**, any ring suitable to implement rotation of brush **120** may be used.

As illustrated in FIG. **2**, brush **130** includes a body **210**, a plurality of bristles **250**, and a means for coupling **270**. In some embodiments, body **210** is configured to couple to tail sweep hose **110** using means for coupling **270**. Body **210** may be at least partially hollow and include a mouth **215** for receiving tail sweep hose **110**. In some embodiments, body **210** includes a conduit **220** which permits water to flow through body **210** and exit through an emission hole **225**.

In the illustrated embodiment, body **210** is substantially conical in shape. Although this disclosure depicts and describes body **210** having a specific configuration, body **210** may have any suitable configuration and be of any appropriate shape or dimensions. In some embodiments, body **210** is tapered. For example, body **210** may be wider at the end with mouth **215** than at the end with emission hole **225**. Such tapering of brush **120** may encourage bristles **250** to make sufficient contact with pool surfaces and facilitate rotation about tail sweep hose **110**.

In some embodiments, body **210** may be constructed from plastic, elastomers (e.g., Viton®, Aflas®, Kalzrez®, ethylene propylene, silicone, fluorosilicone, neoprene, nitrile, etc.) or any other suitable material. Preferably, body **210** is made from a material that is chlorine-resistant and non-corrosive.

Body **210** may also include various utility and/or design features. For example, in some embodiments, body **210** may include a plurality of apertures **230**. The size and shape of apertures **230** may vary according to desired characteristics of brush **120**. As one example, apertures **230** may be configured to secure bristles **250**. As another example, apertures **230** may pass through to conduit **220** permitting water to spray out from apertures **230**. Thus, brush **120** may clean pool surfaces with bristles **250** and/or jet action. Jet action may also be desirable to facilitate rotation about tail sweep hose **110**.

In some embodiments, bristles **250** project outwardly from body **210**. Brush **120** may have any suitable number of bristles **250**. In some embodiments, bristles **250** may project individually from body **210** (see e.g., FIGS. **3**A-**3**B). In other embodiments, bristles **250** may project from body **210** in clusters (see e.g., FIGS. **1**-**2**). As used herein, a "cluster" may refer to a collection of bristles **250**.

In some embodiments, bristles **250** (or clusters thereof) may be secured to a portion of body **210**. For example, bristles **250** may be secured to an outer surface **235** of body **210**. As another example, such as depicted in FIG. **2**, bristles **250** (or clusters thereof) may be secured to an inner surface **240** of body **210** through apertures **230**. In other embodiments, such as depicted in FIGS. **3**A-**3**B, bristles **250** (or clusters thereof) may be contiguous of body **210**. For example, bristles **250** and body **210** may be constructed from a single mold.

In some embodiments, bristles **250** (or clusters thereof) are configured to project from body **210** such that they are substantially parallel (e.g., within +/−20 degrees) to body **210** (e.g., bristles **250***a*). In other embodiments, bristles **250** (or clusters thereof) are configured to project from body **210** such that they are substantially perpendicular (e.g., within +/−20 degrees)) to body **210** (e.g., bristles **250***b*). In yet other embodiments, bristles **250** (or clusters thereof) are configured to project from body such that they are substantially diagonal (e.g., between 30 to 60 degrees) to body **210** (e.g., bristles **250***c*). A brush **120** comprising bristles **250** of varied projection angles may be associated with increased cleaning performance.

Bristles **250** may be made from a variety of materials. For example, they may be made from elastomers (e.g., rubber, silicone, etc.), hair (e.g., horse, ox, sheep, etc.), wood fibers (e.g., bamboo), vegetable fibers (e.g., tampico, kittool, palmyra, etc.), synthetic fibers (e.g., nylon, polyester, polypropylene, etc.), or wire (e.g., aluminum, brass, carbon steel, etc.). In some embodiments, brush **120** may include bristles made from one or more of the above-listed materials. For example, in some embodiments, a first cluster of bristles **250** may be made of elastomers and a second cluster of bristles **250** may be made of synthetic fibers. As another example, in some embodiments, a single cluster may include bristles made from animal hair, wood fibers, and wire. Although specific types of bristles have been described, bristles **250** may be made from any suitable material. Some materials may be more desirable than others based on stiffness of bristles, availability, cost, etc.

In some embodiments, brush **120** may include bristles **250** having a uniform stiffness. In other embodiments, brush **120** may include bristles **250** of varying stiffness. For example, in some embodiments, some clusters of bristles **250** may have a first stiffness and other clusters of bristles **250** may have a second stiffness. As another example, a single cluster may have bristles **250** having varied stiffness. Varying the stiffness of bristles **250** may be associated with increased cleaning performance, particularly of hard-to-remove staining.

In some embodiments, brush **120** may include bristles **250** having a uniform length. In other embodiments, brush **120** may include bristles **250** of different lengths. For example, in some embodiments, the length of bristles **250** in a first cluster is different than the length of bristles **250** in a second cluster. As another example, in some embodiments, a single cluster may include bristles **250** of different lengths. Varying the lengths of bristles may be associated with increased cleaning performance.

FIGS. **3**A-**3**B illustrate example configurations of bristles **250**. The configuration of bristles **250** (or clusters thereof) may vary. For example, in some embodiments, such as that depicted in FIG. **3**A, bristles **250** are arranged in a substantially linear formation. In another embodiment, such as that depicted in FIG. **3**B, bristles **250** are arranged in an elliptical formation. Although this disclosure depicts and describes specific configurations of bristles **250**, brush **120** may have any suitable configuration of bristles **250**.

In some embodiments, such as depicted in FIGS. **3**A-**3**B, the configuration of bristles **250** (or clusters thereof) may

form guide channels **310**. Guide channels **310** may direct the flow of water through guide channels **310**, thereby increasing torque on brush **120**. Increasing torque on brush **120** may increase the speed of rotation of brush **120**. Increasing the speed of rotation of brush **120** may be associated with certain advantages such as increased cleaning performance.

FIGS. **4**A-**4**C illustrate examples of means for coupling **270**. Generally, means for coupling **270** couples brush **120** to a ring **130** on tail sweep hose **110**. In some embodiments, such as that depicted in FIGS. **4**A-**4**C, means for coupling **270** and ring **130** are coupled by friction-fit. In other embodiments means for coupling **270** is coupled to ring **130** using one or more fasteners. Fasteners may include bolts, buttons, buckles, ties, clamps, clasps, nails, pegs, slots, and/or screws. Fasteners may also include any other suitable device that mechanically affixes means for coupling **270** to ring **130** and allows rotation of ring **130**. In yet other embodiments, means for coupling **270** is coupled to ring **130** using adhesives, tape, and/or magnets.

In some embodiments, means for coupling **270** may be an extension from mouth **115**. For example, in some embodiments, such as that depicted in FIG. **4**A, means for coupling **270** is one or more teeth **270***a*. In some embodiments, teeth **270***a* enclose around ring **130** or tail sweep hose **110** to ensure secure coupling of brush **120** to tail sweep hose **110**. Teeth **270***a* may be of any suitable size and shape. Teeth **270***a* may be made of any suitable material. In some embodiments, teeth **270***a* extend onto ring **130**. In other embodiments, such as depicted in FIG. **4**A, teeth **270***a* extend over ring **130** and contact tail sweep hose **110**.

Teeth **270**A may be tapered or untapered. Tapering teeth **270***a* may provide brush **120** with a more secure coupling because teeth **270***a* grasp tail sweep hose **110** or ring **130**. As depicted in FIG. **4**A, tail sweep hose **110** may be inserted into mouth **215** of brush **120** by pushing tail sweep hose **110** past teeth **270***a*. In some embodiments, teeth **270***a* may flex to accommodate tail sweep hose **110** and/or ring **130**. In some embodiments, teeth **270***a* pinch down on ring **130** or tail sweep hose **110** to secure the coupling between tail sweep hose **110** and brush **120**.

In some embodiments, means for coupling **270** may be positioned within mouth **215** of brush **120**. For example, in some embodiments, such as depicted in FIG. **4**B, means for coupling **270** may be one or more protuberances **270***b* within mouth **215**. For example, mouth **215** may be lined with one or more protuberances **270***b* which provide a friction fit over ring **130**. There may be any suitable number of protuberances **270***b* and that protuberances **270***b* may be of any suitable size and shape. In some embodiments, protuberances **270***b* may be configured to flex upon entry of tail sweep hose **110** into mouth **215**. In other embodiments, protuberances **270***b* may be configured to be displaced or depressed upon entry of tail sweep hose **110** in mouth **215**. Following clearance of ring **130**, protuberances **270***b* may resume initial position, thereby securing the connection between tail sweep hose **110** and brush **120**.

As another example, means for coupling **270** may be a ridge that is inset from mouth **215**. In some embodiments, ridge may encircle the inner surface of mouth **115** and provide a friction fit of ring **130**. In some embodiments, ridge may be configured to flex or be displaced or depressed upon entry of tail sweep hose **110** into mouth **215**. Following clearance of ring **130**, the ridge may resume initial position, thereby securing the connection between tail sweep hose **110** and brush **120**.

In other embodiments, such as depicted in FIG. **4**C, means for coupling **270** may be a seal such as a gasket **270***c*. In some embodiments, gasket **270***c* may line all or part of mouth **215** and provide a friction fit over ring **130**. In other embodiments, gasket **270***c* may be placed around ring **130** and a friction fit is formed between gasket **270***c* and mouth **215** of brush **120**.

In operation, brush **120** is coupled to tail sweep hose **110** using means for coupling **270** to form tail sweep **100** (see FIG. **1**). Tail sweep **100** may be coupled to automated pool cleaner **500** (see FIG. **5**). In some embodiments, connector **115** may be required to ensure proper coupling of tail sweep **100** and automated pool cleaner **500**. In some embodiments, coupling tail sweep **100** to automated pool cleaner **500** includes coupling tail sweep **100** to tail sweep jet **520**.

In some embodiments, automated pool cleaner **500** includes a supply hose **530** that is configured to couple to an inlet of a swimming pool. When coupled, automated pool cleaner **500** is provided with pressurized water which is expelled from emission hole **225** (or in some embodiments, from both emission hole **225** and apertures **230**).

In some embodiments, the water flowing through automated pool cleaner **500** drives the automated pool cleaner **500** around the pool. In other embodiments, the water flowing through automated pool cleaner **500** causes tail sweep **100** to travel through the water, possibly in a whipping motion. As described earlier, the weight of rings **130** may cause tail sweep **100** to stay at or near pool surfaces permitting these surfaces to be swept and scrubbed by tail sweep **100**. Sweeping may cause the dislodging of debris from a pool surface by tail sweep **100**. Scrubbing may rub or buff a pool surface by tail sweep **100**. Once tail sweep dislodges, displaces, or otherwise frees debris from pool surface, debris may be caught in a filter bag **510** of automated pool cleaner **500**.

Movement of tail sweep **100** through the water may generate torque on rings **130**, causing rings **130** to rotate around tail sweep hose **110**. Because brush **120** is coupled to at least one ring **130**, brush **120** rotates with that ring **130**. As a result, brush **120** may rotate around tail sweep hose **110**. Rotation of brush about tail sweep hose **110** may cause the bristles **250** to scrub the pool surfaces with sufficient force to remove debris and/or staining.

FIG. **6** illustrates a method for cleaning a swimming pool with automated pool cleaner **500**, carried out according to the principles of the disclosure. The below-described steps may be performed concurrently and/or in any suitable order. The method **600** begins in a step **605**.

At a step **610**, tail sweep **100** sweeps at least one surface of the swimming pool. The at least one surface of the swimming pool may be any suitable surface of the swimming pool including the bottom of the pool, sides of the pool, and/or steps, stairs, or other. In some embodiments, sweeping includes contacting the at least one surface of the swimming pool with tail sweep **100** and moving tail sweep **100** relative to the at least one surface. In some embodiments, tail sweep **100** includes tail sweep hose **110** having a first and second end, wherein tail sweep hose **110** is coupled at one end to automated pool cleaner **500** and coupled to brush **120** at the other end. In some embodiments, rings **130** are rotatably disposed around tail sweep hose **110**. Brush **120** includes body **210** for receiving tail sweep hose **110**, bristles **250** (or clusters thereof) projecting from body **210**, and means for coupling **270** brush **120** to at least one of rings **130**. Bristles **250** may be arranged in any suitable configuration as described above. Sweeping by tail sweep **100** may include agitating debris from the at least one surface of the swimming pool.

In some embodiments, method **600** may continue to a step **615**. In step **615**, brush **120** of tail sweep **100** scrubs the at least one surface of the swimming pool. The scrubbing by brush **120** includes making contact with the at least one surface while the brush rotates around the hose **110**. In some embodiments, rotation of brush **120** about the hose causes relatively even wear of bristles **250**. Scrubbing with brush **120** may include rubbing or buffing the at least one surface of the swimming pool to dislodge, displace, or otherwise free debris.

In some embodiments, method **600** may continue to a step **620**. In step **620**, at least some of the debris is removed from the swimming pool. In some embodiments, at least some of the debris is vacuumed into filter bag **510** of automated pool cleaner **500**. In other embodiments, at least some of the debris may be removed from the swimming pool by a pool skimmer. In yet other embodiments, at least some of the debris may be removed by a combination of both automated pool cleaner **500** and pool skimmer. Although various means of removal have been specifically described, this disclosure recognizes any suitable means for removing debris from swimming pool.

The method ends in a step **625**. In some embodiments, method **600** may end by manual shut down of automated pool cleaner **500**. In other embodiments, method **600** may end by automatic shut down of automated pool cleaner **500**. For example, in some embodiments, automated pool cleaner **500** may be configured to shut off after a specified period of time. As another example, automated pool cleaner **500** may be configured to automatically shut off upon detection that filter bag **510** is completely full.

Herein, "or" is inclusive and not exclusive, unless expressly indicated otherwise or indicated otherwise by context. Therefore, herein, "A or B" means "A, B, or both," unless expressly indicated otherwise or indicated otherwise by context. Moreover, "and" is both joint and several, unless expressly indicated otherwise or indicated otherwise by context. Therefore, herein, "A and B" means "A and B, jointly or severally," unless expressly indicated otherwise or indicated otherwise by context.

The scope of this disclosure encompasses all changes, substitutions, variations, alterations, and modifications to the example embodiments described or illustrated herein that a person having ordinary skill in the art would comprehend. The scope of this disclosure is not limited to the example embodiments described or illustrated herein. Moreover, although this disclosure describes and illustrates respective embodiments herein as including particular components, elements, functions, operations, or steps, any of these embodiments may include any combination or permutation of any of the components, elements, functions, operations, or steps described or illustrated anywhere herein that a person having ordinary skill in the art would comprehend. Furthermore, reference in the appended claims to an apparatus or system or a component of an apparatus or system being adapted to, arranged to, capable of, configured to, enabled to, operable to, or operative to perform a particular function encompasses that apparatus, system, component, whether or not it or that particular function is activated, turned on, or unlocked, as long as that apparatus, system, or component is so adapted, arranged, capable, configured, enabled, operable, or operative.

What is claimed is:

1. A tail sweep for cleaning a pool, comprising:
a hose, the hose comprising a first end and a second end, wherein the first end is operable to be coupled to an automated pool cleaner;
at least one ring disposed around the hose;
a brush comprising:
an emission hole configured to expel liquid;
an at least partially hollow body defining a mouth and a conduit, wherein:
the mouth has a first diameter that is greater in size than a diameter of the at least one ring;
the conduit extends from an interior portion of the mouth to the emission hole; and
a plurality of bristles projecting from the at least partially hollow body;
a means for coupling the brush to the at least one ring in a manner that facilitates rotation of the brush about the hose, wherein the means for coupling is configured to:
deform from a static shape to a deformed shape to allow passage of the ring and the second end of the hose into the mouth; and
retake the static shape upon the passage of the ring and the second end of the hose, whereby retaking the static shape retains the ring and second end of the hose within the mouth.

2. The tail sweep of claim **1**, wherein the plurality of bristles comprise bristles having a composition of at least one material, the at least one material being one of:
elastomer;
hair;
wood fiber;
vegetable fiber;
synthetic fiber; or
wire.

3. The tail sweep of claim **1**, wherein the plurality of bristles comprise bristles having different stiffness.

4. The tail sweep of claim **1**, wherein the plurality of bristles project from the body in an elliptical configuration.

5. The tail sweep of claim **1**, wherein the at least one ring comprises a wear ring.

6. The tail sweep of claim **1**, wherein the at least one ring comprises a hose weight.

7. A brush for use in cleaning a pool, comprising:
an emission hole configured to expel liquid;
an at least partially hollow body defining a mouth and a conduit, wherein:
the mouth has a first diameter that is greater in size than a diameter of a wear ring disposed about the hose;
the conduit extends from an interior portion of the mouth to the emission hole;
a plurality of bristles projecting from the at least partially hollow body;
a means for coupling the brush to the wear ring in a manner that facilitates rotation of the brush about the hose, wherein the means for coupling is configured to:
deform from a static position to a deformed position to allow passage of the ring and the second end of the hose into the mouth; and
retake the static shape upon the passage of the ring and the second end of the hose, whereby retaking the static shape retains the ring and second end of the hose within the mouth.

8. The brush of claim **7**, wherein the plurality of bristles comprise bristles having a composition of at least one material, the at least one material being one of:
elastomer;
hair;
wood fiber;
vegetable fiber;
synthetic fiber; or
wire.

9. The brush of claim **7**, wherein the plurality of bristles comprise bristles of different stiffness.

10. The brush of claim **7**, wherein the plurality of bristles comprise bristles having different lengths.

11. The brush of claim **7**, wherein the plurality of bristles project from the body in an elliptical configuration.

12. The brush of claim **11**, wherein the elliptical configuration of bristles create a plurality of channels.

13. The brush of claim **7**, wherein the plurality of bristles are configured to be substantially parallel to the at least partially hollow body.

14. The brush of claim **7**, wherein the plurality of bristles are configured to be substantially perpendicular to the at least partially hollow body.

15. The brush of claim **7**, wherein the at least partially hollow body is substantially conical in shape.

16. The brush of claim **7**, wherein the at least partially hollow body is tapered.

* * * * *